DOCUMENT RESUME

ED 239 054 CE 037 879

TITLE	Emergency Victim Care. A Training Manual for Emergency Medical Technicians. Module 1. Personnel, EMS Vehicles, EMS Communications, Records and Reports. Revised.
INSTITUTION	Ohio State Dept. of Education, Columbus. Div. of Vocational Education.
PUB DATE	83
NOTE	48p.; For related documents, see CE 037 880-892.
AVAILABLE FROM	Vocational Instructional Materials Laboratory. Ohio State University, 154 W. Twelfth Avenue, Columbus, OH 43210.
PUB TYPE	Guides - Classroom Use - Materials (For Learner) (051)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	*Allied Health Occupations Education; Case Records; *Communications; Data Collection; *Emergency Medical Technicians; Employee Responsibility; Job Skills; Learning Modules; Learning Theories; Maintenance; *Motor Vehicles; Personnel Needs; Postsecondary Education; Recordkeeping; *Records (Forms); Reports; Rescue; Staff Role; Student Attitudes; Study Guides; Study Habits; Study Skills; Vocational Education
IDENTIFIERS	Ambulance Equipment; *Emergency Medical Services; Emergency Vehicles

ABSTRACT

This student manual, the first in a set of 14 modules, is designed to train emergency medical technicians (EMTs) in Ohio. This introductory module contains five sections. The first section introduces the series of modules, listing the contents of each one, and discusses the student-instructor relationship, how to study, and principles of learning. The other four sections cover the following course content: personnel, emergency medical service vehicles, emergency medical service communication, and records and reports. Each section contains objectives, an introduction, and information text. Sample blank forms for the communications and records sections are included. (KC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

EMERGENCY VICTIM CARE

ED239054

Module 1

—Personnel
—EMS Vehicles
—EMS Communications
—Records and Reports

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

B Shoemaker

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CE037879

OHIO TRADE AND INDUSTRIAL EDUCATION SERVICE

Division of Vocational Education
State Department of Education
Columbus, Ohio

Copyright — 1976

Trade and Industrial Education Service

Edited and distributed by the:
Instructional Materials Laboratory
Trade and Industrial Education
The Ohio State University
College of Education
Columbus, Ohio 43210

Revised 1983

This text is intended for use as a learning aid and to excite your curiosity and eagerness to serve patients. This text is not exhaustive and the opinions and directory comments will change from time to time as new procedures and laws become effective.

The Ohio Department of Education insures equal employment and equal educational opportunities regardless of race, color, creed, national origin, handicap, sex or in compliance with state directives and federal recommendations.

EMERGENCY VICTIM CARE

A TRAINING MANUAL FOR EMERGENCY MEDICAL TECHNICIANS

OHIO TRADE AND INDUSTRIAL EDUCATION SERVICE

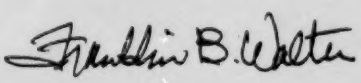
DIVISION OF VOCATIONAL EDUCATION
STATE DEPARTMENT OF EDUCATION
COLUMBUS, OHIO

PREFACE

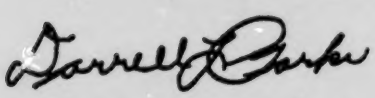
The Trade and Industrial Education Service within the Division of Vocational Education, the State Department of Education has assisted public schools to provide training in Trade and Industrial occupations to the citizens of Ohio since 1918. Its purpose has been to prepare young men and women for employment in all types of industrial and service work, as well as to upgrade adult workers for greater efficiency in their chosen fields. Public service training, including emergency victim care training, is an important part of the total vocational program in Ohio.

Ohio is proud of the vocational instruction provided to local communities in emergency victim care training. This training has undoubtedly been responsible for alleviating suffering and saving many lives in the state. Emergency victim care training has been developed to serve the citizens of Ohio by providing well qualified persons to deal with emergency situations. The personnel trained may be members of fire departments, police departments or other agencies involved in the emergency treatment and transport of the sick and injured.

This updated and improved instruction manual is designed to serve as a text for emergency victim care training and includes the latest information on sound practices in emergency medical care.



Franklin B. Walter, Superintendent
of Public Instruction



Darrell L. Parks
Director of Vocational Education

FOREWORD

The Ohio Trade and Industrial Education Service, Division of Vocational Education, State Department of Education, has taken an active part in the training of emergency medical personnel since 1958. Through the development and utilization of part-time instructors, the Trade and Industrial Education Service has provided training to fire departments, emergency medical services — both paid and volunteer — private emergency medical services, ambulance services, industrial rescue units, law enforcement agencies and medical personnel.

This manual has been revised and expanded to be an educational reference for the Emergency Medical Technician. There is no magic in this text; an individual must study the material and practice its applications with a full understanding of what needs to be done during an emergency situation.

At the completion of basic studies, it is highly recommended that the EMT seek National Registration and that the EMS request voluntary certification from the Ohio Department of Health. Information on these two programs has proven beneficial to the EMT and can be found in the back of the book. Appendix II is a self-study guide on medical terminology.

It is my sincere desire that the emergency medical personnel throughout Ohio will realize the ultimate benefits to be gained by the use of this text as a part of all EMS training programs.

James H. Wiblin

James H. Wiblin
Assistant Director, Vocational Education
Trade and Industrial Education Services

ACKNOWLEDGMENT

The 1983 revision of the EVC manual is a culmination of the combined efforts of many people who are dedicated to providing the most efficient and effective prehospital care possible.

Special acknowledgment is extended to the following personnel at the Vocational Instructional Materials Laboratory, The Ohio State University, Columbus, Ohio, for coordinating the development and production of this revision.

Daryle Oakes, Emergency Medical Service Consultant
Joyce Keefer, Trade and Industrial Education Consultant
Kim Riley Price, Editor
Tom L. Hindes, College of Education

Recognition is extended to the following personnel for their contributions to this revision:

Michael Frank, M.D.
John Adkins, Attorney-at-Law
John H. Mason, Ph.D.
Lloyd Kaczmarek, State of Ohio Fire Marshal's Office
Pam Dillon, Ohio Department of Natural Resources
Kenneth Cole, Nuclear Program Supervisor
Andrew DiBartolomeo, M.D.

The following persons are also recognized for their assistance in this revision:

Kathleen Musser, M.D.
EMS Instructors Association
Representatives of American College of Emergency Physicians
Dr. James Bartholomew, Supervisor Health Occupations, State of Ohio Department of Education
Willis Troy, EMS State Coordinator
Terry Kirkpatrick, EMS State Coordinator

The Trade and Industrial Education Service also wishes to acknowledge the following individuals, institutions, associations and manufacturers for permission to use pictures, illustrations and other material and assistance in the preparation and development of the original EVC manual.

William Hamelberg, M.D.
Paul H. Curtis, Jr., M.D.
Thomas Williams, M.D.
John G. Boutselis, M.D.
Ronald Berggren, M.D.
Roy L. Donnerberg, M.D.
Fred M. Kapetansky, M.D.
Richard M. Ward, M.D.
C. Joseph Hatfield, M.D.
Wesley Furste, M.D.
Joseph T. Barr, O.D.
Robert N. Clark, M.D.
Bernard DeLeo, M.D.
J.D. Farrington, M.D.
Archer S. Gordon, M.D.
Paul Hyman, M.D.
R. Todd Monroe, E.M.T.
Norma Peal, E.M.T.
Wayne Cowan, E.M.T.
John Sanders, E.M.T.
Scott Swearengin, E.M.T.-P.
Dan Badgley, Head Keeper-Reptiles, Columbus Zoo
Mike Goode, Curator-Reptiles, Columbus Zoo
Marvin Hardy
Euclid General Hospital, Euclid
Licking Memorial Hospital, Newark
The Ohio State University Hospital, Columbus
The American Diabetes Association
The American Heart Association
The Central Ohio Heart Association
The Lost Chord Club of Columbus
The Ohio Disaster Services Agency
Acropolis Books-Colortone, Inc.
Braun Industries
Dave Ellies Industrial Design, Inc.
Dayton Tech Art Company
Dyna-Med., Inc.
Ferno-Washington, Inc.
The Horton Company
Hudson Oxygen
George Morrice, M.D.
Thomas Morse, M.D.
Ralph Pickett, M.D.
Henry Rocco, M.D.
Paul J. Shultz, M.D.
R. E. Van Skoy, D.O.
Robert C. Waltz, M.D.
Marcia A. Miller, M.S., R.N.
Kathryn Sampson, R.N.
Lee St. John, Ph.D.
Douglas Magilvy M.S., E.M.T.-P.
Members of the Medical Advisory and Review Committee for the original Emergency Victim Care manual
Amanda Emergency Medical Service
Baltimore Fire Department
Clinton Township Fire Department
Columbus Fire Department
Dublin Fire Department
Fayette County Life Squad
Martins Ferry Fire Department
Minerva Park Fire Department
Newark Fire Department
Newark Police Department
Ohio State University Division of Fire Safety
The Ohio Highway Patrol
Sharon Township Fire Department
Willoughby Hills Fire Department
Groesbeck Fire Department
Linde Company
The C. V. Mosley Company
Parr Emergency Product Sales Inc.
Puritan Equipment, Inc.
Wince Oxygen Supply
Aerospace Education Foundation
United States Air Force
Hammock Productions, Michael Hammock, Media Consultant

The Assistant Director and Emergency Medical Services Training staff of the Trade and Industrial Education Service utilize the services of an Ad Hoc Advisory Committee for Emergency Medical Service Training. The organizations represented are as follows:

American College of Emergency Physicians
National Registry, Emergency Medical Technician
Ohio Ambulance Association
Ohio Association of Emergency Medical Services
Ohio Board of Regents
Ohio Committee on Trauma, American College of Surgeons
Ohio Department of Health, Emergency Medical Services Coordinating Program
Ohio Department of Transportation, Bureau of Transportation Safety
Ohio Fire Chief's Association
Ohio Fire Service Training Advisory Committee
Ohio Funeral Directors Association
Ohio Hospital Association
Ohio Orthopedic Society, American Academy of Orthopedic Surgeons
Ohio Osteopathic Association of Physicians and Surgeons
Ohio Peace Officers Training Council
Ohio State Medical Association
Representatives of Trade and Industrial Education, Emergency Medical Technician-Ambulance, Instructors

The Emergency Victim Care manual and training program are officially recognized by the following agencies and associations:

The United States Department of Transportation
National Highway Traffic Safety Administration
The Ohio Ambulance Association
The Ohio Association of Emergency Medical Service
The Ohio Department of Health
The Ohio Department of Highway Safety
The Ohio Emergency Medical Services Coordinating Program
The Ohio Emergency Medical Services Ad Hoc Advisory Committee
The Ohio Fire Service Training Advisory Committee
Representing the following:
—The Ohio Fire Marshal's Office
—The Ohio Inspection Bureau
—The Ohio Fire Chief's Association
—The Ohio State Firemen's Association
—The Ohio State Firemen's Association
—The Ohio Association of Professional Fire Fighters
—The International Fire Chief's Association

An additional recognition is offered to Mr. Jack Liberator and Mr. Rocco Morando, former State E.M.S. consultants, who were responsible for the first E.M.T. training manual; and to the following former State E.M.S. coordinators for their past efforts and leadership: Mr. John Mrus, Mr. Arthur Ghiloni, and Mr. Gayle Reeder.

James H. Wiblin

James H. Wiblin
Assistant Director
Trade and Industrial Education

STUDENT-INSTRUCTOR RELATIONSHIP

Attending class regularly and reading the text material prior to class lectures may make your EMT training easier. Take notes during lectures to review prior to the examination. Close cooperation with your instructor will benefit everyone. Feel free to discuss with the instructor any problem pertaining to the Emergency Victim Care course.

HOW TO STUDY

Studying involves planning. There are many different methods of study. Regardless of which method you choose, it is important to follow some plan of study. This will enable you to study more effectively.

1. Survey—Glance over the pages to be read. Review the main subject headings.
2. Question—Ask questions about the material to be studied.
3. Read—Read the material to answer your questions. Take notes.
4. Recite—Recite (aloud or mentally) the answers to your questions.
5. Review—Review what you have read and your notes.

METHOD OF STUDY

SURVEY

During this first step you will preview the material to see what key points will be covered. The survey step should take only a few minutes.

When you survey, look for main headings, underlined or capitalized words, and summaries. Another aid in surveying is to read the topic (first) sentence of each paragraph. Generally, this sentence will summarize the information to follow.

QUESTION

The second step of this method is to question. As you survey the material, ask yourself questions about each subject heading. Begin your questions with words such as: who, why, how, and when. These questions will give you something definite to look for in your reading.

READ

The third step is to read the material to answer the questions you thought of while surveying. Read as fast as you can but not so fast that you miss the meaning.

Effective reading requires concentration. Your mind must be alert to each point covered if you are to benefit from your reading. Remember to read all material including graphs, tables, and illustrative material.

RECITE

The fourth step is to recite. When you have finished reading the material, make an outline of the topic, using your own words. This will help you to see the organization of the material.

Next, reconstruct the information for each of the headings of your outline in your own words, either orally or by forming the words in your mind. This will help you to better understand the material.

REVIEW

The review step is the final step in our method of study. It is important because it aids in remembering the material studied. This step is

based on the fundamental factor of learning called repetition.

The review step is so important to understanding that as much or more time should be spent reviewing as was spent on the surveying, questioning, reading, and reciting steps combined. This step permits you to evaluate your study efforts.

STUDY TOOLS

NOTE TAKING

Note taking is a study aid which will help you to remember what is said in class and in your reading assignments. Your notes should be orderly, pertinent and understandable. They should also cover the key points of the lesson. It will be convenient to keep these notes in a notebook.

Notes taken during class for review should be studied as soon after class as possible. This will aid in retention.

You can take better notes by:

1. Previewing the material to organize it better.

2. Being brief so you can keep up with the lecture material.

3. Expressing ideas in your own words. This will help you when you study for review.

4. Organizing your notes in a clear, logical order so you can see how everything fits together.

5. Underlining key words and phrases.

6. Keeping your notes neat and easy to read.

7. Having neat handwriting. This will not only help you to read your notes when reviewing, but will help others to read your handwriting on worksheets and exams.

8. Making sure to include key points on which the instructor places special emphasis.

OUTLINING

When you study, you should outline the material from your Training Manual. This will help you in your note taking during class or when you review.

Following an outline form, as shown in Figure 1, will help keep your notes organized.

1. Parts of the ear
   a. Outer
      (1) Pinna
      (2) Canal
   b. Middle
      (1) Tympanic membrane
      (2) Ossicles
      (3) Eustachian tubes
   c. Inner
      (1) Cochlea
      (2) Semicircular canal
2. Parts of the eye

Figure 1. Topic outline

LISTENING

Learn to listen. Listen to learn. Much of your time in the classroom will be spent learning through listening. Attentive listening is important. If you are not paying attention to what is going on in class, you may copy wrong information or miss important points.

STUDY TIME

You can make the most of your study time by doing the following.

1. Study as soon as possible after each class.

This will help you in learning while the material is fresh in your mind.

2. Know what your objectives are and study to achieve them.

3. Keep in mind how the text material can be used by you.

4. Have a regular study time and place.

STUDY ENVIRONMENT

Your study environment should be as free of distractions as possible. A quiet, well-lighted room is most desirable and conducive to easier learning.

LOCATING INFORMATION

Locating authoritative sources of information will help you in your studying. If you encounter unfamiliar words in your reading, look them up using a dictionary. The library offers many references which can be used in your study assignments.

READING ABILITY

Many people have difficulty learning because of poor reading habits. Reading too slowly or having too many eye fixations are examples of poor reading habits. A fixation is when the eye movement stops and the reader concentrates on a word. Too many fixations will result in slow reading.

One way to increase your reading speed is to widen your "span of vision" to include more words per eye movement. When your eye fixations include groups of words instead of individual words, you will increase both your reading speed and comprehension. Another poor reading habit is looking back at words.

Your reading speed will also be slower if you pronounce each word as you read. People who pronounce each word usually read about 200 words per minute while those who avoid this habit usually read about 600 words per minute. When you can read faster than you speak, you have overcome this habit.

Poor concentration is another cause of poor reading ability. If minor distractions cause your thoughts to wander, you have poor concentration. Reading at a faster rate should help to improve your concentration.

PRINCIPLES OF LEARNING

Like any science, learning is based on well defined principles. We study for one reason—to learn. A new skill, job proficiency or task knowledge is the real aim of our study. Our goal is not to spend so many hours in class or to read so many pages of a study guide. Rather, it is to better ourselves by acquiring new ways of doing things or satisfying desires.

No doubt you have heard of the expression "educated idiot." Learning is more than the transmission of a group of facts from a book or lecture to your mind. Unless you are able to apply what you have learned to your life or work situation, you have not accomplished anything.

Some of the principles of learning include:

MOTIVATION

REACTION

CONCENTRATION

ORGANIZATION

COMPREHENSION

REPETITION

MOTIVATION

The importance of motivation in an athletic event has long been recognized. Motivation is just as important to you in your study situation.

In fact, it is probably the most important factor that influences your learning.

We often think of motivation as interest. When you are interested in something, you have a definite objective in mind and a reason for reaching the objective. Motivation becomes greater when you are studying something important to your future.

Motivation may be brought about by:

1. Determining exactly what you need to know.

2. Knowing how the newly acquired information will benefit you.

REACTION

Learning must be an active process if it is to be successful. You must participate fully in the learning process. **The more you participate, the more you will learn.**

As a student, you will be faced with new procedures, ideas and principles. One of the best ways to react in your new learning situation is to take notes during class and while reading. Putting lecture or reading material in your own words will help you to take better notes.

CONCENTRATION

Learning requires concentration. When you study, you must focus the full powers of your mind on the material to be learned. If you are to understand and learn the material, you must put forth a total effort. A half effort will not do! Improve your concentration by eliminating outside distractions.

ORGANIZATION

Studying the organization of your Training Manual will help you to see the total picture. When your study materials were written, the authors had general patterns of information and ideas they wanted to get across to you. Unless you recognize this pattern, you will be lost in the details.

COMPREHENSION

Comprehension is understanding the basic ideas of the author or instructor. Putting the lecture or study material in your own words will help you to comprehend it. In addition, organizing the material so that it makes sense to you will also be of benefit to you. Taking notice when you read topic headings and sentences, italicized words, underlined phrases, summary paragraphs, and review questions will help to improve your comprehension. When you have comprehended the material, you should be able to apply it to some present or future work situation.

REPETITION

Repetition is another factor influencing learning. In order to remember something you must repeat it. Material studied at short intervals over a period of time will be retained much better than that studied under a crash program.

During class time, your study time may be limited. You will do better if you set aside a certain portion of time each day for review. Although repetition is important to learning, it does not guarantee it. To get the most from repetition, you must apply it along with the principles of motivation, reaction, concentration, organization, and comprehension.

Memorizing the principles of learning will not make you an efficient learner. However, understanding their application will assist you greatly in your future technical school studies.

NOTE: Subject matter for this text has been reviewed by ACEP representatives. Suggested emergency medical care treatment in different geographical localities often varies. Information included within this text is recognized as the more common treatment; however, please check with your local medical advisor and/or medical facility personnel for local protocol.

NOTE: The workbook is designed to reinforce learning. It is suggested, to complete each compatible workbook chapter as you study the text material.

TO THE LEARNER

The 1983 Emergency Victim Care textbook revision has been grouped into 14 modules. The modules have been grouped by content matter as follows:

Module 1

Preface
Foreword
Acknowledgment
Student-Instructor Relationship

Personnel
Emergency Medical Service Vehicles
EMS Communication
Records and Reports

Module 2

Equipment
Safe Driving Practices
Legal Aspects
Controlling the Situation
Action Evaluation Conference

Module 3

Anatomy & Physiology

Module 4

Vital Signs
Patient Assessment

Module 5

Cardiopulmonary Resuscitation (CPR)

Module 6

Bleeding Control
Wounds and Bandaging
Shock

Module 7

Medical Emergencies

Module 8

Crisis Intervention
Drug-Related Problems

Module 9

Backboards/Moving and Handling the Victim
Fractures
Dislocations

Module 10

Injuries of the Eye, Ear, Nose, Abdomen, C.N.S. and Genitalia
Burns and Environmental Injuries

Module 11

Childbirth
Pediatric Emergency

Module 12

Water Accidents
Electrical Emergencies
Hazardous Materials and Radiation Accidents

Module 13

Extrication from Automobiles

Module 14

Appendix I: Communicating with Deaf and Hearing Impaired Patients
Appendix II: Medical Terminology
Appendix III: EMS Organizations
Appendix IV: Legislation
Glossary of Terms
Index

MODULE I

TABLE OF CONTENTS

Preface iii

Foreward iv

Acknowledgment v

Student-Instructor Relationship ix

Personnel 1

Emergency Medical Service Vehicles 7

EMS Communication 15

Records and Reports 19

PERSONNEL

OBJECTIVES

Upon completion of the following chapter, you will be able to:
—itemize the duties of an EMT.
—describe the qualifications needed to be an EMT.

INTRODUCTION

Every person assigned to an emergency medical service or rescue squad unit is responsible for that unit's successful operation. Only when this is recognized and accepted can satisfaction and efficiency be obtained. Saving lives is serious and should be handled by trained, qualified personnel. Under many circumstances a small amount of first aid knowledge is **not enough** to assure the safety and welfare of a victim. It is mandatory that only personnel who have successfully completed and passed the State Emergency Victim Care Training course, or other equivalent training program, approved by the Department of Transportation (D.O.T.), be considered for this important duty.

Good public relations are extremely important in any department. The services of the squad must sell themselves through the conduct and efficiency of individual EMTs. Therefore, it is imperative EMTs be selected with great care in order that they obtain respect from the public. Following are more specific recommendations to be used in the selection of personnel.

U.S. DEPT. OF TRANSPORTATION JOB DESCRIPTION EMERGENCY MEDICAL TECHNICIAN

WORK REQUIREMENTS

—The EMT responds to emergency calls to provide efficient and immediate care to the critically ill and injured and transports patients to medical facilities.

—After receiving the call from the dispatcher, the EMT drives the ambulance to the address or location given, using the most expeditious route, depending upon traffic and weather conditions.

—The EMT observes traffic ordinances and regulations concering emergency vehicle operation.

—Upon arrival at the scene of an accident or illness, the EMT parks the ambulance in a safe location to avoid an accident.

—In the absence of police, the EMT enlists the assistance of available persons to create a safe traffic environment; such as the placement of road flares, removal of debris and redirection of traffic for the protection of the injured and those assisting in the care of the injured.

—The EMT determines the nature and extent of illness or injury and establishes priority for required emergency care.

—The EMT renders emergency care, such as opening and maintaining an airway, giving positive pressure ventilation, cardiac resuscitation, controlling hemorrhaging, treating shock, immobilizing fractures, bandaging, assisting in childbirth, assisting mentally disturbed patients and giving initial care to poison and burn patients.

—The EMT reassures patients and bystanders by working in a confident, efficient manner.

—The EMT avoids mishandling and undue haste while working expeditiously.

—When patients need extricated from entrapment, the EMT assesses the extent of injury and gives all possible emergency care and protection to the entrapped patient. The EMT also uses the prescribed techniques and appliances for removing the patient safely.

—The EMT radios the dispatcher for additional help or special rescue and/or utility services, if needed.

—The EMT provides life rescue service if the ambulance has not been accompanied by a specialized unit.

—After extrication, the EMT provides additional care in sorting injured personnel in accordance with standard emergency procedures.

—The EMT complies with regulations when handling the deceased, notifies authorities and arranges for protection of property and evidence at the scene.

—The EMT assists in lifting the stretcher, placing it in the ambulance and seeing that the patient and stretcher are secured and emergency care is continued.

—From the knowledge of the condition of the patient, the extent of injuries, and the relative locations and staffing of emergency hospital facilities, the EMT determines the most appropriate facility to which the patient will be transported, unless otherwise directed by the dispatcher or a physician.

—The EMT reports directly to the emergency department or control center the nature and extent of injuries, number being transported and destination to assure prompt medical care on delivery. For serious cases, the EMT may ask for additional advice from the hospital physician or emergency department personnel.

—The EMT observes the patient en route to the emergency facility and administers additional care as indicated or directed by physician.

—The EMT identifies diagnostic signs which may require radio communication with a medical facility for advice and for notification that special professional services and assistance be immediately available upon arrival at the medical facility.

—The EMT assists in lifting and carrying the patient out of the ambulance and into the emergency medical facility.

—Verbally and in writing, the EMT reports observation and care of the patient at the emergency scene and in transit to the emergency department staff for record and diagnostic purposes; and upon request, to the emergency department staff.

—After each trip, the EMT replaces used linen, blankets and other supplies; sends supplies for sterilization; makes a careful check of all equipment so the ambulance is ready for the next run; maintains the ambulance in efficient operating condition; ensures the ambulance is clean and washed and kept neat and orderly, in accordance with local or state regulations; decontaminates the interior of the vehicle after transport of a victim with contagious infection or radiation exposure; determines if the vehicle is in proper operating condition by checking gas, oil, water in battery and radiator and tire pressure; maintains familiarity with specialized equipment items used by the ambulance service.

NOTE: Seniority and responsibility should be determined by the one responsible for employment and surveillance of personnel. Attendants and drivers should be equally trained in each other's duties and responsibilities so they may function interchangeably or independently in caring for multiple casualties.

EDUCATION, TRAINING AND EXPERIENCE

—To qualify as an EMT, an applicant must have a minimum of a high school education

or equivalency qualification. The applicant must be 18 years of age or older.

—Minimum training of the prospective EMT shall be that prescribed in the basic training program for Emergency Medical Technician-Ambulance of the U.S. Department of Transportation and the Public Health Service, or equivalency.

—The EMT must have practical experience in the care and use of emergency equipment commonly accepted and employed, such as suction machines, oxygen delivery systems (installed and portable), backboards, fracture kits, emergency medical care kits, obstetrical kits, intravenous kits, stretchers of various types, light rescue tools and basic automobile mechanics. A basic understanding of sanitizing and disinfecting procedures and knowledge of safety and security measures are also required.

—Through critiques and conferences with emergency department personnel, the EMT acquires constructive criticism of care rendered and instruction in advances in patient care and in new or improved equipment.

—A thorough knowledge of the territory within the EMT's service area and the traffic ordinances and laws concerning the emergency care and transportation of the sick and injured are acquired. The EMT must also have the necessary driver and professional licenses as required by law.

SPECIAL CHARACTERISTICS

APTITUDES

The EMT must possess the following aptitudes.

—Motor coordination in administering emergency care of the critically ill and injured, in lifting and carrying patients and in driving the ambulance.

—Manual dexterity and physical coordination in carrying, lifting, extricating, climbing, hoisting and other similar maneuvers in a manner not detrimental to the patient, coworkers or self.

—Ability to give and receive verbal and written directions and instruction.

PERSONAL QUALITIES

The EMT must:

—Maintain a pleasant personality.

—Possess leadership ability; be firm yet courteous.

—Possess the ability to make sound, reasonable judgments.

—Maintain a clean, neat appearance.

—Possess good moral character.

—Possess stability and psychological adapatability.

PHYSICAL DEMANDS

Physically, the EMT must:

—Maintain normal, good health.

—Possess the ability to lift and carry up to 100 pounds.

—Possess visual color discrimination in examining patients and determining, by appearance, diagnostic signs that require immediate detection and proper action as well as to distinguish traffic signs and lights.

—Possess both far and near visual acuity necessary for driving and examining the patient (correction by lenses permitted).

QUALIFICATIONS

NOTE: The following items are not listed in any special order of importance. They are to be used comprehensively and collectively and will merely serve as a guide to determine the overall capability of each EMT applicant.

1. **You must have volunteered for the job.** This is primarily an indication that you want to take part in the performance of this particular duty at your own request. As a rule, you will not care to do a job or carry out the duties of a job if you have a physical or mental aversion to the obligation involved.

2. **You must be available.** There is no point in being assigned to a lifesaving unit when it may be questionable as to whether you will, or will not be in a position to respond to the alarm. For example, if your private work takes you out of the community, you would not be a good choice. However, if there are a number of persons involved in the same situation, it might be well to give some thought to the idea of organizing the personnel on a so-called day or night platoon basis. Thus EMS personnel would be available on a round-the-clock basis.

3. **You must be dependable.** Dependability is of the utmost importance. This virtue gives assurance that, as an EMT, you will carry out assignments to the best of your ability.

4. **You must have a good reputation.** A person's good name and standing in public esteem must definitely fit into the analysis. This type of public work will present many delicate situations, especially when the confidence of the victim in you, the EMT, is sorely needed. In short, are you a good citizen?

5. **You must present a good appearance.** A slovenly, dirty and unkept individual will immediately cause the victim, as well as the general public, to look with disfavor upon the benefactor. Even a stranger, when carefully groomed, is an asset when dealing with others. Many emergency and rescue units have a type of white shop coat available to their EMTs. Such a coat is easily donned and gives personnel that look of neatness and cleanliness which is always so desirable.

6. **You must have a pleasant personality.** Arrogance and superiority will be quickly resented. Courtesy and understanding will always open the door for a better relationship with the victim. The public will also react and cooperate more favorably when treated in a firm but courteous manner.

7. **You must be cooperative.** This is a characteristic which calls upon a person's ability to harmonize, pull together, work shoulder-to-shoulder, and go along with others. It may be said that people do not think together but, under emergency situations, they should act together. There is no time for bickering at the scene of an emergency. Orders and methods must be carried out even if they are not to individual liking. As a rule the end result is the same.

8. **You definitely must be interested in the job.** This is fundamentally a specialized field. Consequently, there will always be new and different approaches, techniques and procedures offered on the subject. If the enthusiasm is there to learn, study, and keep abreast of the times, such an individual will definitely be an asset to the squad. Then again, it must be realized that each persons's interests are different. There are many firefighters who are happy just to be good firefighters because they love firefighting. On the other hand, the same answer is also applicable to EMTs. Personnel, once placed on emergency units, often make it their life's work. Whichever job it may be, however, the deciding factor is controlled by the person's interest in the job at hand.

9. **You must have initiative.** Your ability to determine what has to be done, and then having the capability of going ahead and doing it, is an important qualification in this line of work. The necessity to deal with unusual situations, conditions and circumstances, makes it

imperative that squad and emergency personnel have this qualification.

10. **You must be cool, level-headed and have the ability to exercise common sense.** Emergency situations call upon the individual to use these qualities because of the turmoil which exists during the time of an emergency. The situation, when handled wisely and properly, will make matters easier for everyone concerned.

11. **You must have an aptitude for training.** The study and training time involved in learning to be a good EMT is in substance not a long-term indoctrination of practice and knowledge. First aid and lifesaving courses are outlines to supply the utmost in information and training in a practical and reasonable length of time. Therefore, the ability to learn quickly and having the natural talent to apply this training is an important factor in personnel selection.

12. **You must have leadership ability.** "As ye lead, so shall they follow" may be a safe axiom in this case. Emergency situations always call for an immediate show of authority and command. When used wisely, this quality will make it easier to control the emergency.

13. **You must be in good health and physical condition.** One never knows, when responding to an emergency alarm, exactly what is involved. An EMT may be called upon to climb, run, dig, pull, push, etc. Therefore, it is very important you have normal, good health and recognize physical abilities to perform your duties in a manner that is not detrimental to the victim, your co-EMT, or yourself.

COMPLEMENT OF EMERGENCY AMBULANCE UNITS

A minimum of three EMTs should be assigned to respond to every emergency. This number should include an officer or an EMT-in-charge. However, due to a lack of personnel, a response may include only two EMTs. If such is the case, the EMT will, on many occasions, request assistance from the family or bystanders to lift, carry, etc. **Under no conditions should an emergency vehicle be dispatched with less than two EMTs.**

CHAPTER II

EMERGENCY MEDICAL SERVICE VEHICLES

OBJECTIVES

Upon completion of the following chapter, you will be able to:

—describe the necessary fundamentals related to effective emergency medical service.

—itemize the areas of basic design required for an emergency care vehicle.

Following instruction you will be able to:

—perform an emergency vehicle inspection and complete a written inspection report.

INTRODUCTION

Many residents of our communities are unfortunate and innocent victims of tragedies and disasters which, needless to say, are increasing in alarming numbers. As more and more traffic accidents, drownings, fires, explosions, tornadoes, floods, airplane crashes, and many other misfortunes occur, there is a tremendous need for well-trained personnel and special equipment to handle these situations. It is a recognized fact that saving lives is of paramount importance when these emergencies occur. But, it also must be recognized that the necessary equipment must be available to do the job. Emergency medical units are being organized in steadily increasing numbers throughout the nation to cope with these new demands. Encouragement to groups of people trying to organize such units is of vital importance. One way to do this is to make certain they are provided with the best training and the best equipment to make them into lifesaving and rescue units.

LOCAL NEEDS AND RESPONSIBILITIES

Adequate emergency medical services are as much a governmental responsibility as fire-fighting and law enforcement. If the local community does not provide this service directly, it should verify the quality of the existing services meets the accepted standards of emergency medical care. Emergency medical services should also include a program of mutual aid with other communities to guarantee efficient operations in cases of natural disasters or large-scale emergencies such as plane crashes, explosions and similar situations where large numbers of people may be involved.

To establish the adequate emergency medical service, the following items must be incorporated.

1. Organization: Complete cooperation with all civic, professional, industrial, and medical associations and agencies is essential.

2. The Vehicle: The EMS vehicle should be designed and equipped to insure the ultimate in emergency care at the scene and en route to the hospital.

3. Equipment: Sufficient equipment is needed to administer emergency care within the range of those situations that may be encountered.

4. Training: All personnel must be trained to administer the ultimate in emergency care to properly utilize the tools of the service, and to establish a continuing education program.

5. Communication: Two-way radios linking all vehicles with a base station and the hospital emergency room are a necessity.

TYPES OF EMERGENCY MEDICAL SERVICE VEHICLES

There are various designs of EMS vehicles built today by reputable manufacturers. Many of these are "stock models," but others are built according to the buyer's specifications. Before an emergency medical service decides to buy a vehicle, it must define the purpose of its operation. If the service is to provide the ultimate in emergency care and transportation, then the vehicle should be designed and equipped to be of use:

1. At the scene.
2. While moving a victim to or from the vehicle.
3. En route to a hospital.

It is important that the buyer make a careful study to determine exactly what options and equipment are needed on a vehicle to make every effort to conform to the nationally recommended standards for ambulance design and equipment.

To be classified as an emergency ambulance, a vehicle must provide space for a driver, two EMTs, and two victims; positioned so that at least one victim can be given necessary life support during transportation. Equipment and supplies must be carried to provide a two-way radio communication, tools for light rescue procedures, and the necessary equipment and supplies to administer emergency care outside the vehicle and during transport. The vehicle must be designed and constructed to afford maximum safety and comfort and to avoid aggravation of a victim's condition.

RECOMMENDED SPECIFICATIONS FOR THE EMERGENCY AMBULANCE

The following information is a reprint from the publication entitled "Medical Requirements for Ambulance Design and Equipment," National Research Council, National Academy of Sciences, Division of Medical Sciences, and was prepared by its subcommittee on ambulance services. The requirements and recommendations listed reflect the committee's projection to the eventual development of a prototype that will completely fulfill the mission in providing emergency medical services. **Additional requirements may be made by individual states. Before planning or purchasing a vehicle, a check for the most current specifications should be made with the state agency responsible for ambulance certification. The Ohio Emergency Medical Services Advisory Council has prepared specifications for ambulances used in Ohio. It is recommended these specifications be adhered to by agencies in Ohio who provide Emergency Medical Services.**

GENERAL VEHICULAR DESIGN

General Safety Standards. The ambulance must comply with motor vehicle safety standards issued by the United States Department of Transportation and the Department of Health, Emergency Medical Services.

Identification of Ambulances. An ambulance should be distinct from other emergency vehicles. For easy recognition and to ensure traffic priority, all ambulances should be equipped with the nationally uniform emblem, color, intermittent audible warning signal, and flashing roof light.

Speed and Acceleration. Because rapid and safe arrival of an ambulance at the scene of an accident or in case of the onset of life-threatening illness may be essential to survival, the vehicle must be capable of acceleration comparable with that of other passenger-carrying vehicles; however, optimum preparation before transport and the requirements of comfort, safety, and avoidance of aggravation of the patient's condition preclude excess speed, rapid acceleration, or traffic violation, in delivery of the patient to a medical facility.

Riding Characteristics. An ambulance must ensure smooth, gentle, and comfortable transportation. Ease and reliability of handling are essential. The ambulance should be equipped with a positive-traction differential. Provision for four-wheel drive may be necessary in areas of rough terrain. The braking system should be adequate. There should be a minimal pitch, roll, and side-wind effect. The center of gravity should be as low as possible for ease of loading and maximum stability. Puncture-proof tires are essential. Road clearance must be adequate for country roads or disrupted city streets. Underseal of the body is desirable to avoid flooding.

The Floor. The floor of an ambulance must be at the lowest level possible to allow adequate clearance and space for litters and attendants. The ends and sides of the vehicle should have a flat surface and be unencumbered by wheel wells, drive shaft tunnels, etc. It should have a nonskid surface that can be easily cleaned.

Collision Reinforcing Bars. These bars should be incorporated in the sides and rear of the ambulance. To protect occupants in the event of an accident, roll bars or other reinforcement should be incorporated in the roof.

Electrical Power Supply. This power supply is the motor and should be capable of producing sufficient current at 12 volts to meet such vehicular requirements as lighting, radio, and temperature control. The battery should be of sufficient capacity to function for at least 20 minutes with the motor not running. In addition, a 110-volt, at least 3000-watt, power supply must be provided for installed and portable equipment.

DRIVER AREA

Separation of the driver from the patient area is essential to afford privacy for radio communication and to protect the driver from an unruly patient. The bulkhead must be strong enough to support an attendant's seat in the patient area at the top of the patient's head and to withstand deceleration forces of the attendant in case of accident.

Access to the driver area is to be provided by two doors, one on each side. Access to the patient area must be either direct (by passing through an opening in the bulkhead) or indirect (by leaving the driver area and entering an external door to the patient area). There must be provision for both visual and voice communication between the two compartments.

Lighting must be available in the driving compartment for both the driver and an attendant to read maps, records, etc. There must be shielding of the driver's area from the lights in the patient compartment.

Environmental control should allow for adequate ventilation, heating, and cooling. This equipment must be capable of reaching 75° F

in a reasonable time and maintaining this temperature under various operating conditions. Rapid air exchange (ventilation) may prove necessary under certain circumstances; for instance, during the transport of gas-contaminated victims. Entry of exhaust gases must be avoided.

Safety requirements for the driver area include restraining devices, dash padding, collapsible steering wheel, and such other safeguards as prescribed by the Department of Transportation.

Communication equipment requiring space in the driver area consists of a two-way radio, a tachograph, maps, manuals, and such records as the driver may need to maintain.

PATIENT AREA

Minimum overall dimensions of the patient area must provide for a 23-inch wide litter and a 16-inch wide squad bench or two 23-inch wide litters.

Minimum space between the head of the litter and the bulkhead must be 25 inches, including a seat with headrest and seatbelts for an operator who sits at the patient's head for respiratory care and resuscitation.

Minimum space at the foot of the litters must be 15 inches to accommodate traction splints and/or an attendant. The handle of folding litters extending beyond 76 inches is accommodated within this space.

Minimum space between litters must be 12 to 18 inches (depending on vehicle) of clear aisle space with 25 inches in CPR area. This allows an operator to kneel beside a patient on a pillow with the arms straight, and use maximal body weight in performing cardiac compression.

The minimal height throughout this area is 60 inches from floor to ceiling.

Crash-stable fasteners must be provided to secure litters to the floor or side walls. Litters must not be suspended by wall brackets or from the ceiling. Where a single patient may be centered in the area on the wheeled litter, additional attachments should be provided. Floor and sidewall attachments should be flush with the surface when not in use.

Seats must be provided for attendants; one at the top of the patient's head, as described above. In addition, seating space with restraints should be provided for ambulatory patients; for example, in the form of a fixed bench otherwise used to support a folding litter.

Equipment, installed or portable, and all supplies must be positioned for ready accessibility and must not impinge on litter or access areas. Storage cabinets and installed equipment, including recessed ceiling hooks for suspension of intravenous-fluid containers, should be designed or positioned to avoid projecting injurious objects.

Doors must be provided at the rear and curbside at the front of the patient area of the ambulance. The rear doors should be hinged to open flush with the sides and ceiling of the patient area and stabilized in the open position to permit litters to be placed into their ultimate riding positions with minimum movement of patients. Latches should permit easy opening with one hand. The curbside door must allow an attendant to take position rapidly and easily at the head of a patient and to remove patients in an emergency if the rear door is jammed.

Steps, if present, should be built to prevent slipping and accumulation of snow, ice, or mud.

Communication with the driver area, both visual and by voice, must be provided. Access to the two-way radio equipment is required for communication with dispatchers, hospitals, physicians, etc.

Illumination must be adequate throughout the compartment and provide an intensity of 40 foot-candle power at the level of the patient for adequate observation of vital signs, such as skin color and pupillary reflex, and for care in transit. Lights should be controllable from the entry doors, the head of the patient, and the driver's compartment. Windows, if present, should not encroach on necessary storage space

and, while providing daylight, should ensure patient privacy and safety.

Environmental control of the patient area must allow for adequate ventilation with doors and windows closed and for comfortable heating and cooling. The ventilation system should provide a temperature of 75°F within minutes and to maintain that temperature under extremes of operating conditions. Entry of exhaust gases must be avoided.

Interior surfaces of the patient area must be insulated; resistant to water, heat, and chemicals; and easily cleaned. There should be no sharp projections that could be injurious.

Safety belts for attendants must be provided. These belts must be strong enough to meet deceleration requirements of the Department of Transportation. A padded headrest should be installed above the seat fixed to the bulkhead. Safety belts and/or restraints also must be provided for patient protection during transit, including control of the unruly or mentally disturbed patient.

Power outlets for 110 volts should be provided inside the ambulance near the patient for use of specialized equipment during transport and for recharging battery powered equipment. They also must be available outside the ambulance for floodlights and electrically powered rescue tools. Receptacles should be approved, grounded units.

Figures 1 and 2 show two types of Emergency Medical Services vehicles which meet all the requirements.

VEHICLE CARE AND MAINTENANCE

Care and maintenance of an emergency medical vehicle and every piece of equipment it carries should be delegated to dependable and reliable officers and EMTs. Regardless of who performs the maintenance operation, the officer-in-charge should direct the work and inspect the results. This procedure is not meant to imply that the people who do the clean-up job cannot be relied upon, but rather it places the different levels of responsibility where they belong. After all it is the officer's duty to see that this unit is ready to respond at all times.

Therefore, in order to insure instant and efficient performance by an apparatus, it is imperative that certain items be checked and inspected after each run. The following list can be used as a guide to direct this inspection service. Other items can be added by the local department in accordance with existing policies, rules, and regulations.

After each run, the following items should be checked for defects and any services or needed repairs should be noted.

1. Brakes and their related parts
2. Gasoline and oil levels - Replenish if necessary and look for leaks
3. Tires - Inspect for foreign bodies, cuts and check air pressure
4. All gauges and instruments of the dash board
5. Battery, especially on radio-equipped vehicles
6. Radiator - Check water level of cooling system
7. Safety belts
8. Lights - Head, tail, stop, directional, dash, dome, and warning lights
9. Steering mechanism
10. Mirrors - Rear and side(s)
11. Siren - Check for proper operation

One very important factor in maintenance which must not be overlooked is CLEANLINESS. It has been well established that a neat appearance is an asset to an EMT, likewise the EMS vehicle. The EMS vehicle must be kept

Figure 1

Figure 2

clean inside and out to protect patients as well as the EMT. The handling of contagious diseases is a good example as to why the emergency vehicle must be kept clean.

In addition to the vehicle's routine inspection, it is advisable to have a complete and thorough periodic check of the automotive equipment. It is recommended that this be made at least once a month. An inspection record should be maintained on a report form, which will be filed for reference. The driver, a mechanic, or whoever is qualified or detailed to do this work as stipulated by local policy, should be be held responsible for this job. Figures 3 and 4 are copies of forms used at the present time by some departments. Please note that on the Monthly Operation Report only the signature of the person making the inspection is included, while on the Monthly Vehicle Inspection Report an additional signature by the officer is required. The latter definitely indicates to the officer the defects reported. The officer's signature certifies awareness of these problems. However, local policy should determine the procedure to be followed.

MONTHLY OPERATION REPORT

Date _____ Equipment No. _____

Note: This report shall be completed by the driver on duty the last day of the month.

No. of Runs this Month _____ Miles traveled _____ End of Month Speedometer Reading _____

No. of Times Repairs were made _____ Out of Service _____ Days _____ Hours _____ Minutes _____

No. of Times Mechanical Defects were reason for not completing run _____

State Reason Why _____

Gasoline Used _____ Gals. Oil Used _____ Qts. Date: Greased _____ Oil Change _____

Accidents this Month _____ Driver's Name _____

Figure 3. Monthly operation report

MONTHLY VEHICLE INSPECTION REPORT

The following items have been inspected _____ (Date) and found as indicated.

1. Are all bolts tight? _____
2. Are steering connections tight? _____
3. Are spring clips tight? _____
4. Are tire lugs & hub bolts tight? _____
5. Does cooling system leak? _____
   If so, where? _____
6. Does motor leak oil? _____
   If so, where? _____
7. Are there any other oil leaks? _____
   If so, where? _____
8. Is motor oil level proper? _____
   If not, why? _____
9. Does clutch (if any) have proper clearance? _____
10. Do brakes need adjusting? _____
11. Is battery in proper order? _____
    If not, why? _____
12. Condition of tires: Good ___ Fair ___ Poor ___
    F. Left _____ F. Right _____
    R. Left _____ R. Right _____
    Dual Inside Left _____
    Dual Inside Right _____
    Spare _____ Other _____
13. Do doors and windows work properly? _____
    If not, why? _____
14. State condition of windshield _____
    Windshield wipers? _____
    and Blades? _____

Did the following instruments function properly when tested this date? _____ (Date)

1. Ammeter? _____
2. Heat indicator? _____
3. Speedometer? _____
4. Oil preasure gauge? _____
5. Gasoline gauge? _____
6. Brake pressure gauge? _____
7. Brake oil level gauge? _____
8. Power unit oil levels? _____
9. Other? _____

State last date air reservoir tanks were drained _____ (Monthly)

Driver's Signature _____

Officer's Signature _____

Figure 4. Monthly vehicle inspection report

EMS COMMUNICATION

OBJECTIVES

Upon completion of the following chapter, you will be able to:
—describe the necessary elements for an emergency medical communications system coordinated among the dispatcher, the EMT and the receiving medical facility.
—describe techniques used and information that should be included when communicating with a receiving medical facility.

Following instruction and/or practice you will be able to:
—conduct appropriate communications among EMS personnel following approved procedures.

INTRODUCTION

A major key to the smooth operation of an emergency medical service is the use of effective communications among the service's dispatcher, the EMT, and the receiving medical facility. The nature of emergency medical communications requires procedures that are, in most instances, different than those used by other emergency services such as fire.

ELEMENTS OF EMS COMMUNICATIONS

A smooth flowing emergency medical service communication system is essential from the moment an emergency takes place, and does not end until the EMTs have completed their run and are back in the station. Citizens, dispatchers, EMTs, hospital personnel, and members of other safety services such as police and fire, all enter into the system. Emergency communications include the phases of detection, notification, transportation, and return to station.

Detection — Once an emergency has occurred, it must be discovered and recognized as being an emergency. For example, a citizen walking down the street must realize that the person who appears to be asleep in a doorway may actually be ill or injured.

Notification — After an emergency has been detected, the proper emergency medical service must be selected and called. This notification may be made by telephone or two-way radio. In some cases, the notification may be made in person if the victim stops at the dispatch center or squad station to request assistance. Many communities have developed an area-wide phone number so citizens may call a single number to request help, even if they are uncertain of where they are and what specific emergency medical service is needed.

Dispatch — The dispatcher must note important details such as the location and nature of the incident. It is very helpful to have the phone number of the caller so that the dispatcher can call back to reconfirm information about the run, if necessary. Training the dispatcher as an EMT is very desirable.

The dispatcher must then select the appropriate response to the incident. This initial response might include police, fire, and rescue personnel in addition to the closest available squad.

EMT personnel may be alerted to the incident by a variety of methods. If EMTs are standing by at the station, they may be called by radio, intercom, or a special telephone "hot line." On-call EMTs may be notified of the emergency by a radio paging system. In this method, the dispatcher transmits a special tone or tones from the radio base station. A radio receiver in the form of a pocket pager or alert monitor is carried by the EMT. When the correct tone is received, the paging device emits a loud tone and broadcasts the dispatcher's message.

Other methods of alerting on-call personnel include the use of a siren, standard telephone, or special "fire-bar" telephone that rings at several locations at the same time. Many departments are moving away from these systems because they are cumbersome, time consuming, or involve alerting of personnel that are not necessary for the run.

Action — Once EMTs are on board the squad, they respond to the scene and assist the patient. Each squad should have, at minimum, the capability of communicating with the dispatcher by two-way radio at all times. The squad may encounter difficulties en route to, or at the scene. The EMT should have the capability of requesting additional assistance by radio.

Hospital Notification — In most areas, hospitals request notification when squads transport patients to their facility. This is particularly important when the special or critical patient requires specific personnel be called in from home or other areas of the hospital. It is desirable to have direct communications between the squad and the emergency room. If this is not possible, messages can be verbally relayed through the dispatcher.

Transportation — EMTs should have communication with their dispatcher during transport of the patient. Hospital notification may take place during this time.

Return to Station — Two-way radio communication is desirable during the return trip to the station. During this time, the vehicle is available to respond to a new emergency call.

COMMUNICATIONS TECHNIQUE

Each service should determine the exact manner and policy on how its units should communicate. It is most important to remember that professionalism should be considered every time the radio is used. Slang terms and unnecessary transmissions should be avoided. Profanity should not be tolerated under any circumstances. The radio call letters of the transmitting station should be broadcast according to Federal Communications Commission regulation.

Each EMT should remember there is little privacy in two-way radio transmission. With the advent of low cost monitor radios or "scanners", many members of the community consider monitoring public safety channels a hobby. Using good radio technique is just as important as keeping the squad clean and stocked. Poor radio technique can create a poor view of the service in the mind of the public.

CODING CALLS

The use of radio code information is used in many areas. Coding of radio communications has several advantages. Transmissions are kept brief and confidential patient information is not easily understood by citizens with home monitors. The patient is not able to easily understand what is being said to the dispatcher or hospital. Overhearing the EMT describing a critical condition may only increase a patient's shock.

However, if codes are used, all personnel must be familiar with the system. Hospital staff must be aware of the meaning of the codes. Caution should be used when relaying coded information among various public safety agencies. If two agencies handling a message use different codes, then the message may be understood to have a completely different meaning than was intended.

Generally EMTs will not memorize all of their codes. However, the EMT will remember the ones frequently used. One code that should be memorized by all personnel is the one that indicates "EMT in trouble-EMT needs help." If the EMT is in a threatening situation, this coded call for assistance should be made without delay.

COMMUNICATION BETWEEN THE EMT AND THE MEDICAL FACILITY

An accurate and organized radio report is very important for effective communications between EMT personnel in the field and hospital personnel about to receive the victim. This verbal communication must be organized so emergency room personnel are given an accurate assessment of the victim. This will help the receiving emergency room prepare for the patient's arrival and facilitate a smooth transition from the emergency medical vehicle to the emergency room. Some hospitals request the initial transmission take place after the examination of the victim and before treatment. Other medical facilities only require radio communication prior to arrival at the emergency room. (Be sure to check with local medical advisors.)

EMT-EMERGENCY ROOM COMMUNICATION

1. Identification
   a. Call to the hospital; identify squad and specify what channel you are using.
   b. Identify the level of care being offered to the victim (i.e., "This is ... squad functioning as basic" or "advanced squad."
2. Detail rescue circumstances (i.e., "We are at a resident at ... Street")
3. Identify age and sex of victim(s) (i.e., "We are treating a 32-year-old female ...")
4. Identify reasons EMS squad was called (i.e., "... called the EMS squad for help. Victim is complaining of severe abdominal pain.")
5. Give brief history of victim; more specific details of victim's condition (i.e., "Victim ate a large dinner two hours ago and is expressing pain — seems to be getting sharper in the lower abdominal region.")
6. Past medical history of the victim (i.e., "The victim has been a diabetic for ... years.")
7. Medication and allergic condition of victim (i.e., "Victim is taking _____ units of insulin daily; no other medications; no known allergies.")
8. Victim's overall appearance (i.e., "The victim is alert, no respiratory distress apparent; the skin is flushed.")
9. EMT's examination findings (i.e., vital signs, etc.)
10. Treatment being given by the EMT prior and/or during transport.
11. Further instructions from hospital personnel.
12. Clearing (i.e., "EMT squad ... out"; "Hospital personnel ... out.")

RECORDS AND REPORTS

OBJECTIVES

Upon completion of the following chapter, you will be able to:
—recognize the need for an accurate run report.
—describe pertinent information to be included on a run report.

Following instruction and/or practice, you will be able to:
—complete a written report following an emergency run.

INTRODUCTION

Proper reporting and record keeping are extremely important in the operation of an emergency medical service. This chapter discusses important items of information that should be included on reports for successful operation and future reference. Sections of a run report sheet are shown one at a time, and important items are discussed. Each section extends across both columns with the explanatory text running consecutively from column to column. The complete report form is shown together with several other sample run reports and a typical monthly summary report. See Figures 1 through 8.

RESPONSIBILITY FOR REPORTS

The responsibility for reports is determined by local authority, such as the squad chief, fire chief, ambulance supervisor, EMS coordinator, etc. It is the duty of one of these persons to designate who is responsible for making the report.

IMPORTANT ITEMS ON EMS REPORTS

RECEIVING AND RESPONDING TO ALARM

The date, time of receiving alarm, and location should be placed at or near the top of the report. Many EMS reports provide a place to record "How the Alarm Was Received", that is, by telephone, messenger, police, radio, alarm system, etc. Some EMS run reports include "Time of Arrival at Emergency Location" and "Mileage".

EMERGENCY MEDICAL SERVICE RUN REPORT

Report No. _____

Date _____ Time _____ AM PM Location _____

Condition of Weather _____ Streets _____ Traffic _____

Alarm Received via - Telephone _____ Radio _____ Other _____

Time of Arrival at Emergency Location _____ AM_PM__ Mileage _____

OBSERVING THE CONDITION OF A VICTIM WHEN FOUND

Space should be provided for the name and address of the victim, plus a brief but complete explanation of the EMT's initial observation of the situation.

Space should also be provided to record the names and addresses and important information received from persons who were at the scene before the squad's arrival.

On many report forms the back of the sheet is blank, allowing ample room to include additional information. If data is recorded on a separate sheet of paper, it should be securely attached to the report form for reference.

Victim's Name _____ Address _____

Age _____ Color _____ Sex _____ Marital Status _____

Relative's Name _____ Address _____ Relation _____

EMT Initial Observation (Conditions on Arrival) _____

_____

_____

Observation by Others before Arrival of EMS _____

Name _____ Address _____

What _____

_____

Name _____ Address _____

What _____

_____

EMERGENCY CARE GIVEN BY THE EMTs

A description of the emergency care and other important services given by the EMTs should be included on the report. Here too, the reverse side of the report or a separate sheet of paper may be used.

Description of Services Rendered by the EMT s _____

MEDICAL SERVICES PROVIDED BY A PHYSICIAN AT THE SCENE

This information should be requested from the attending physician and entered on the report. Space should be provided for the attending physician's name and address, the services provided, and instructions or suggestions to either the EMT or hospital personnel. Presenting a scratch pad with pencil to the physician at an appropriate time may assist an EMT in obtaining this information.

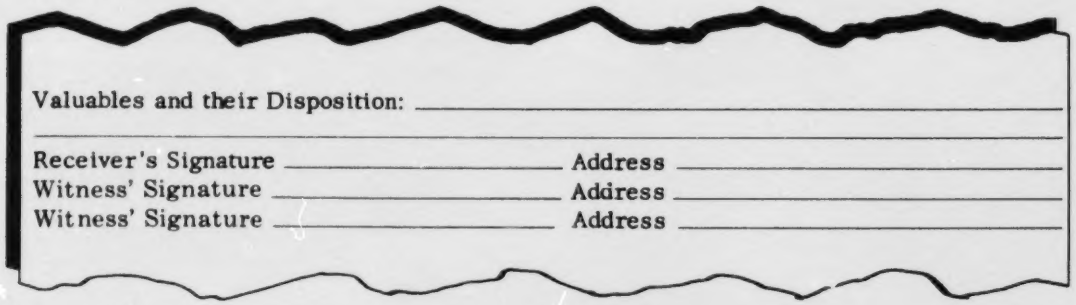
Name of Attending Physician _____ Address _____
Services Administered _____

Physician's Instruction: _____

HANDLING OF VALUABLES

Proper handling of valuables at an emergency is extremely important, and all personal items should be treated as valuable. An item which has little monetary value may be regarded by someone as extremely valuable because it is a gift or keepsake.

It is very important to write out an itemized list, properly signed and witnessed, when valuables are put in the trust of an EMT or others. Usually valuables are not taken from victims who are conscious. (Usually this is left up to the police or hospital.)



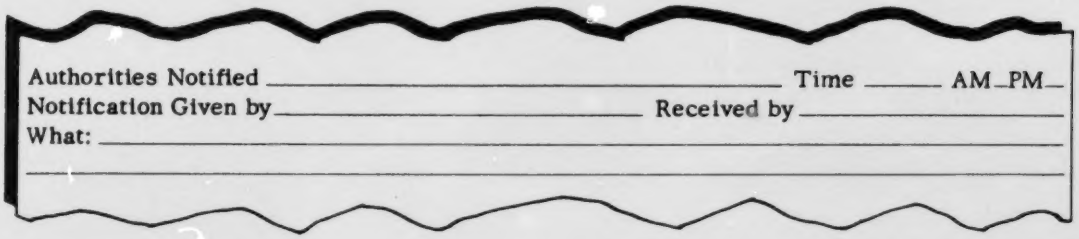
Valuables and their Disposition: _____

_____

Receiver's Signature _____ Address _____
Witness' Signature _____ Address _____
Witness' Signature _____ Address _____

NOTIFYING PROPER AUTHORITIES

In some situations EMTs may be required to notify the coroner, a police agency, or the state fire marshal's office. In this case the name and title of the person receiving the information should be requested and made a part of the report, along with the hour of day when that person was notified. Sometimes the dispatcher, rather than the EMT, obtains this information at the scene. Whatever action is taken, it must conform with the local, state, and federal laws.

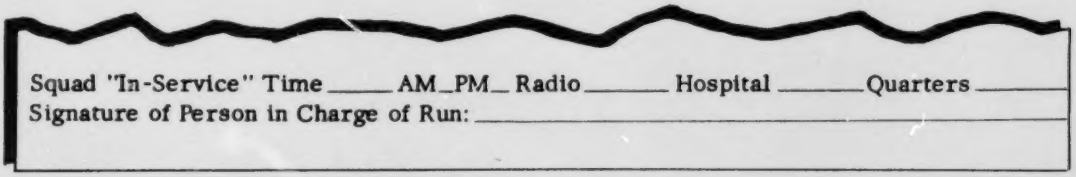


Authorities Notified _____ Time _____ AM_PM_
Notification Given by _____ Received by _____
What: _____

_____

SIGNATURE OF PERSON MAKING REPORT

No report is complete without the signature of the person who made it. Local department rules may require more than one signature.



Squad "In-Service" Time _____ AM_PM_ Radio _____ Hospital _____ Quarters _____
Signature of Person in Charge of Run: _____

SAMPLE REPORTS

Several sample reports are shown here to assist EMS officers in selecting or developing a report best suited to their needs. Some of these samples ask for additional kinds of information, which various services have found to be helpful.

SUMMARY

Gathering data and completing a report **must not** take priority over victim care or transportation of victims to a hospital. There may be occasions when information for a report must be obtained after the victim has been removed from the scene. The need for accurate and complete reports should never be minimized; **however, reports must never take precedence over victim care.**

Original EMS records can be subpoenaed into court. A complete and accurate report reflects the efficiency and professional competence of the service. Follow Statute of Limitations in your state (in Ohio it is seven years).

EMERGENCY MEDICAL SERVICE RUN REPORT

Report No. _____

Date _____ Time ____ AM PM Location _____
Condition of Weather _____ Streets _____ Traffic _____
Alarm Received via - Telephone _____ Radio _____ Other _____
Time of Arrival at Emergency Location ____ AM PM Mileage _____
Victim's Name _____ Address _____
Age _____ Color _____ Sex _____ Marital Status _____
Relative's Name _____ Address _____ Relation _____
EMT's Initial Observation (Conditions on Arrival) _____
_____
_____

Observation by others before arrival of squad _____
Name _____ Address _____
What _____
_____

Name _____ Address _____
What _____
_____

Description of Services Rendered by the Squad _____
_____
_____
_____
_____
_____

Name of Attending Physician _____ Address _____
Services Administered _____
_____
_____

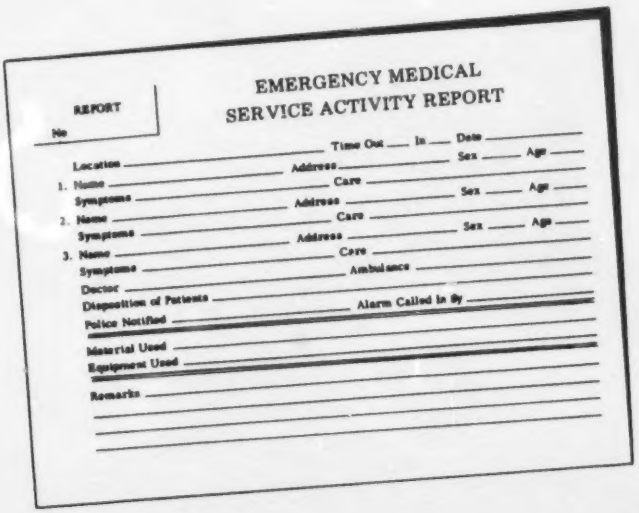
Physician's Instruction: _____
_____
_____

Valuables and their Disposition: _____
_____

Receiver's Signature _____ Address _____
Witness' Signature _____ Address _____
Witness' Signature _____ Address _____
Authorities Notified _____ Time ____ AM PM
Notification Given by _____ Received by _____
What: _____
_____

Squad "In-Service" Time ____ AM PM Radio _____ Hospital ____ Quarters _____
Signature of Person in Charge of Run: _____
Signature of EMT #1 _____
Signature of EMT #2 _____

Figure 1. Emergency medical service run report

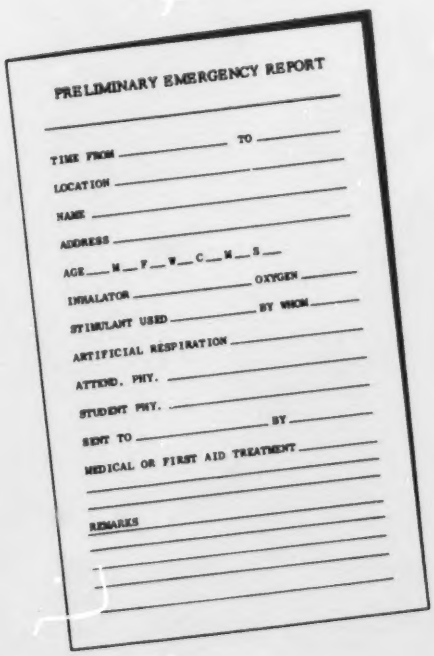


REPORT
No

EMERGENCY MEDICAL
SERVICE ACTIVITY REPORT

Location _____ Time Out ___ In ___ Date _____
1. Name _____ Address _____ Sex ___ Age ___
Symptoms _____ Care _____
2. Name _____ Address _____ Sex ___ Age ___
Symptoms _____ Care _____
3. Name _____ Address _____ Sex ___ Age ___
Symptoms _____ Care _____
Doctor _____ Ambulance _____
Disposition of Patients _____
Police Notified _____ Alarm Called In By _____
Material Used _____
Equipment Used _____
Remarks _____

Figure 2. Emergency medical service activity report



PRELIMINARY EMERGENCY REPORT

TIME FROM _____ TO _____
LOCATION _____
NAME _____
ADDRESS _____
AGE ___ M ___ F ___ W ___ C ___ M ___ S ___
INHALATOR _____ OXYGEN _____
STIMULANT USED _____ BY WHOM _____
ARTIFICIAL RESPIRATION _____
ATTEND. PHY. _____
STUDENT PHY. _____
SENT TO _____ BY _____
MEDICAL OR FIRST AID TREATMENT _____
REMARKS

Figure 3. Preliminary emergency report

EMERGENCY MEDICAL SERVICE REPORT

Date _____ Time _____

Location _____

Type of Run: First Aid ___ Inhalator ___ Fire ___

Name of Victim _____

Address _____

Color _____ Sex _____ Age _____

Symptoms _____

_____

_____

Treatment by EMS _____

_____

_____

Disposition of Victim: Transported Yes ___ No ___

If Transported, by whom _____

Where taken _____

Remarks: _____

_____

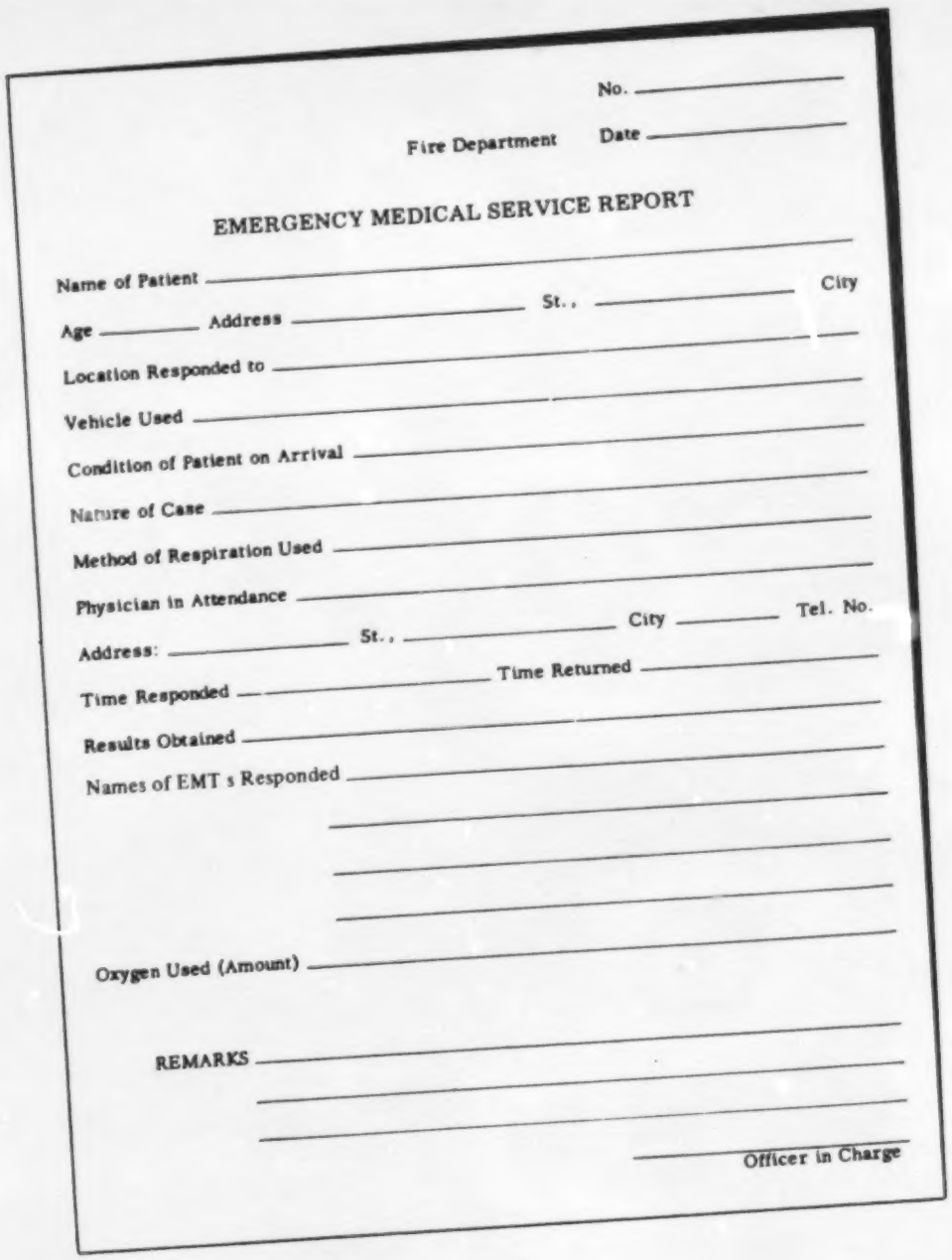
_____

Called by _____

Signed _____

(Use Reverse Side for Additional Information)

Figure 4. Emergency medical service report



No. _____

Fire Department Date _____

EMERGENCY MEDICAL SERVICE REPORT

Name of Patient _____

Age _____ Address _____ St., _____ City

Location Responded to _____

Vehicle Used _____

Condition of Patient on Arrival _____

Nature of Case _____

Method of Respiration Used _____

Physician in Attendance _____

Address: _____ St., _____ City _____ Tel. No.

Time Responded _____ Time Returned _____

Results Obtained _____

Names of EMT s Responded _____

Oxygen Used (Amount) _____

REMARKS _____

Officer in Charge

Figure 5. Emergency medical service report

MONTHLY EMERGENCY MEDICAL SERVICE SUMMARY

RESCUE UNIT NO. _____ FOR THE MONTH OF _____ 19____

NO.	DATE	ALARMS TEL	ALARMS RAD	SQUAD NO.	WORKING TIME HRS.	WORKING TIME MIN.	LOCATION	NATURE OF EMERGENCY	DISPOSITION
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
							TOTALS		

MILEAGE _____ MILES GASOLINE _____ GALS.

_____
OFFICER IN CHARGE

Figure 6. Monthly emergency medical summary

EMERGENCY MEDICAL SERVICE
RUN REPORT CONTROL NO._____

DATE_____TIME OF ALERT_____ UNIT NO._____

Name of victim _____

Address of victim _____ Phone No._____

1 TYPE OF INJURIES OR ILLNESS	1 ☐ Dry Run 2 ☐ Head 3 ☐ Face 4 ☐ Eye 5 ☐ Neck 6 ☐ Back 7 ☐ Chest 8 ☐ Abdomen	9 ☐ Pelvis 10 ☐ Upper Extremity 11 ☐ Lower Extremity 12 ☐ General, Multiple 13 ☐ Respiratory 14 ☐ Cardio Vascular 15 ☐ Electrocution 16 ☐ Fainting	17 ☐ Maternity 18 ☐ Psychiatric 19 ☐ Alcoholism 20 ☐ Burn 21 ☐ Poisoning 22 ☐ Drowning 23 ☐ Suffocation 24 ☐ Other _____	6 CASE SEVERITY SCALE [1] Minor, Trivial
2 STATE OF INJURED	1 ☐ Unconscious	2 ☐ Obviously Alive	3 ☐ Possibly Dead on Arrival at Scene	
3 AID PROVIDED BEFORE EMS UNIT ARRIVED	NONE ☐ Helpful ☐ 1 Harmful ☐ 2 Neither ☐ 3	1 ☐ Artificial Respiration 2 ☐ Controlled Bleeding 3 ☐ Splinting 4 ☐ Removed from Vehicle 5 ☐ Other _____	BY WHOM 1 ☐ Police 2 ☐ Other	[2] Moderate
4 AID PROVIDED BY EMS UNIT CREW	NONE ☐	1 ☐ Airway Cleared 2 ☐ Artificial Resp. 3 ☐ Resuscitator 4 ☐ Airway Tube 5 ☐ Oxygen 6 ☐ Cardiac Massage 7 ☐ Controlled Bleeding 8 ☐ Bandaging 9 ☐ Anti-Shock Measures	10 ☐ Spinal Immobilization 11 ☐ Limb Splints 12 ☐ Pain Relief 13 ☐ I.V. Fluids 14 ☐ EKG 15 ☐ Defibrillation 16 ☐ Patient Restraints 17 ☐ Obstetrical Delivery 18 ☐ Other_____	[3] Severe
5 WHAT WAS LACKING?	1 ☐ Special EQUIPMENT for _____ 2 ☐ Special TRAINING in _____ 3 ☐ FASTER Method of Transportation 4 ☐ Nothing 5 ☐ Don't Know			[4] Critical

Figure 7A. Emergency medical service run report [front side]

7 Use of Lights & Siren	To Scene Yes ☐ No ☐ To ER Yes ☐ No ☐
8 DIFFICULTIES ENCOUNTERED EN ROUTE	NONE ☐ To Scene / To ER Severe Traffic Congestion ☐1 ☐1 Adverse Weather Conditions ☐2 ☐2 Mechanical Trouble ☐3 ☐3 Other _____ (Specify) ☐4 ☐4
9 LOCATION OF PICKUP	Street Address or Highway Route and Nearest Intersection _____ _____

10

REMARKS: Enter here names and addresses of additional patients if more than one. Enter remarks you feel necessary that are not covered above.

11

NAMES OF EMS CREW:

_____ _____

Figure 7B. Emergency medical service run report [reverse side]

CONTROL NO. _____

EMERGENCY ROOM CHECK SHEET

Name of Injured Person

Name of Hospital | Date of Accident | Date of Admission (if different)

1 TIMES

ER ARRIVAL Time ☐ AM ☐ PM ☐

Seen by PHYSICIAN at ☐ AM ☐ PM ☐

DEPARTED ER at ☐ AM ☐ PM ☐

2 TO

1 ☐ Home
2 ☐ Surgery
3 ☐ Hospital
4 ☐ Transfer to ANOTHER Hospital (Name) _____
5 ☐ Jail
6 ☐ Mortuary
7 ☐ Morgue
8 ☐ Other _____

3 ARRIVED FROM 1 ☐ Home 2 ☐ Scene of Accident 3 ☐ Other Hospital 4 ☐ Other

Name _____

4	5	6	7	8	9
☐ CONSCIOUS ☐ STUPOROUS ☐ UNCONSCIOUS	AMBULATORY ☐ Yes ☐ No	SHOCK ☐ Yes ☐ No	Any Evidence of ALCOHOL ☐ Yes ☐ No	AGE	☐ Male ☐ Female

10 Primary Admitting Diagnosis _____

11 MAJOR INJURIES

Type of Injury

	Code
Pain	1
Contusions or abrasions	2
Lacerations	3
Possible sprain or strain	4
Possible fracture or dislocation	5
Possible internal soft-tissue injury	6

Code Type | Code Site

(List type and site pairs in decreasing order of significance)

Site of Injury

Code	
A	Head
B	Face
C	Eye
D	Neck
E	Back
F	Chest
G	Abdomen
H	Pelvis
W	Upper Extremity
X	Lower Extremity

Multiple, Severe (use only when no single injuries can be selected)	Y
General, Non-wound (burn, drowning, electrocution, etc.)	Z

12 FIRST AID or LIFE SAVING MEASURES that MIGHT have improved the patient's status before arrival at the ER?

1 ☐ None
2 ☐ Restored Respiration
3 ☐ Cardiac Massage
4 ☐ Controlled Hemorrhage
5 ☐ More Careful Movement
6 ☐ Faster Transportation
7 ☐ Other _____

13 ☐ DEAD on Arrival ☐ DIED in ER _____ (Time) AM ☐ PM ☐

Apparent Cause of Death _____

14 CASE SEVERITY SCALE

1 Minor, Trivial
2 Moderate
3 Severe
4 Critical

Figure 8A. Emergency room check sheet [front side]

15 PERFORMANCE OF EMS PERSONNEL

☐ Satisfactory ☐ Unsatisfactory

16 REMARKS

If performance of EMS personnel was unsatisfactory, or if any steps should have been taken that were not, please describe them here. Recommend corrective measures if you deem them necessary.

Signature of Reporting Physician or Nurse

_____

This form should be completed on each patient brought to your emergency room by a Rescue Unit. At the end of each week, all accumulated forms should be sent to:

(REPONSIBLE OFFICER
OF EMERGENCY MEDICAL SERVICE
AMB. SERVICE, ETC.)

In event of an unsatisfactory performance by an EMS Crew, the form on that case should be sent in immediately so that corrective action can begin.

Figure 8B. Emergency room check sheet [reverse side]

Available EMS Publications

For ordering and pricing information contact:
Vocational Instructional Materials Laboratory
The Ohio State University
154 W. Twelfth Avenue
Columbus, Ohio 43210
Phone (614) 422-5001

Emergency Victim Care—Student Manual (EVCM)
Emergency Victim Care—Instructor Manual (EVCIM)
Emergency Victim Care—Workbook (EVWB)
EMS Binder—2½" Three-ring binder (EMTB)
Advanced EMT Instructor Manual (EVAIM)
EMS Slide/Tape Series
—Bleeding Control — 42 slides (EMST-1)
—CPR — 72 slides (EMST-2)
—Extrication — 79 slides (EMST-3)
—Fractures — 139 slides (EMST-4)
—Moving and Handling — 111 slides (EMST-5)
—Proper Examination — 68 slides (EMST-6)
—Vital Signs — 28 slides (EMST-7)
—Wounds and Bandaging — 79 slides (EMST-8)
—Anatomy and Physiology (EMST-9)
Victim Rescue Manual—Student Manual
Victim Rescue Manual—Instructor Manual
River Rescue Manual—Student Manual
River Rescue Manual—Instructor Manual
Farm Accident Rescue Manual